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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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30256	7590	03/14/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P			MAURO JR, THOMAS J	
600 HANSEN WAY			ART UNIT	PAPER NUMBER
PALO ALTO, CA 94304-1043			2143	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/841,710	ISHIZAKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thomas J. Mauro Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 13 December 2004.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-6 and 8-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-6 and 8-16 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This action is responsive to the amendment filed on December 13, 2004. In it, claims 7 and 17-20 have been cancelled. Claims 1-6 and 8-16 remain pending and are again presented for examination. A formal action on the merits of claims 1-6 and 8-16 follows.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-6, 8-11, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (U.S. 6,597,956) in view of Salkewicz (U.S. 6,609,153).

Regarding claim 1, Aziz teaches a system comprising:

A connection to a virtual private network [Aziz -- Col. 5 lines 6-22 – Virtual Server

**Farm (VSF) is connected back to Intranet via a Virtual Private Network (VPN);**

At least one server [Aziz -- Figures 1C and 2, Col. 2 lines 35-41 and Col. 6 lines 33-35

– Computing grid contains a large number of CPU's, i.e. application servers or web servers];

A virtual LAN switch, said virtual LAN switch providing selectable forwarding for information to said at least one server [Aziz -- Figure 2 and Col. 6 lines 47-58 – VLAN switch allows forwarding of information between a number of CPU's, i.e. servers];

At least one volume [Aziz -- Figures 1C and 2, Col. 2 lines 35-41 and Col. 6 lines 40-46 – Computing grid contains a number of disks, i.e. storage volumes];

An FC switch, wherein said FC switch provides selectable interconnection between said at least one server and said at least one volume [Aziz -- Figure 2 and Col. 6 lines 58-61 – Servers and disks are interconnected by using a switch, which can be a Fibre Channel (FC) switch], so that information received from a plurality of sources via said virtual private network is directed to a particular server for each of said sources by said virtual LAN switch, and wherein said information is then directed to a particular volume for each of said sources by said FC switch [Aziz -- Figure 2 and Col. 6 lines 21-61 – Information is routed through VPN which is then directed to a plurality of servers, i.e. CPU's, via a VLAN switch which then directs storage to a plurality of disks, i.e. volumes, via an FC switch].

at least two subsystem management systems for controlling configuration of at least two of the router, the virtual LAN switch and the FC switch [Aziz -- Figures 2, 9, 13-14, Col. 6 lines 40-50 and Col. 14 lines 8-15 and lines 29-35 – Two subsystem management systems include

**slave segment managers and farm managers, both subsystems under the master manager, which control one or more, i.e. two, VLAN's and FC switches];**

an integrated service management system communicatively coupled to the at least two subsystem management systems and for controlling configuration of the at least two subsystem management systems [Aziz -- Figure 9, Col. 14 lines 9-14, lines 21-25, lines 29-35 and lines

**57-61 – Master segment manager of control plane, i.e. integrated service management system, manages computing, networking and storage elements of grid by instructing slave segment managers, i.e. subscriber (router) management system, to modify appropriate resources and controls]; and**

a customer portal application communicatively coupled to the integrated service management system and enabling a customer to issue configuration requests to the integrated service management system [Aziz -- Figure 9, Col. 10 lines 34-39, Col. 14 lines 29-42 and lines 59-62, Col. 23 lines 16-48 and Col. 24 lines 35-44 – Customers can enter provisioning information, i.e. change configuration, to master segment manager via a webpage console, i.e. customer portal, which communicates with master segment manager to provision system based upon customers guidelines].

Aziz fails to explicitly teach a router connected to a virtual private network, wherein said router maintains at least one virtual router for a client.

However, routers are common to all networks in operation especially when connecting multiple WAN's, thus it is obvious that Aziz requires the use of a router although one is not shown. Salkewicz, however, discloses a domain isolation system through the use of private virtual networks (VPNs) which employ a networking device, i.e. router, containing numerous virtual

network machine routers (VNMRs) for routing the varying clients, i.e. subscribers **[Salkewicz --**

**Figures 1B, 18 and 21, Col. 11 lines 20-45 and Col. 14 lines 44-67 – Col. 15 lines 1-12].**

Both Aziz and Salkewicz are concerned with protecting and routing subscribers to various services/resources through a VPN connected to the Internet.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the router containing a number of virtual routers (VRs) for clients, as taught by Salkewicz into the invention of Aziz, in order to provide access to secure private networks, i.e. corporations, etc., over the public Internet in addition to allowing users to have improved ability to change network domains **[Salkewicz -- Col. 9 lines 39-41].**

Regarding claim 2, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 1 above, including further including a VPN management system that controls operation of said router **[Salkewicz -- Col. 4 lines 21-40, Col. 12 lines 4-11 and Col. 15 lines 9-54 – Databases associated with router controls access to resources and networks.**

**Subscriber management system runs software to control the operation of the routing based upon the control information in the databases. This information is dynamic and can be changed by administrative control].**

Aziz teaches a hierarchical control process containing a master segment manager and slave segment managers to control and manage the various computing, networking and storage elements in the computing grid **[Aziz -- Col. 14 lines 9-14 and lines 21-25].**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the management system to control operation of the router and all its virtual

network machine routers, as taught by Salkewicz into the invention of Aziz as one of the slave segment managers, in order to provide dynamic, rather than static, bindings [Salkewicz -- Col. 15 line 54] in addition to providing simplified and reduced cost administration of networks [Salkewicz -- Col. 12 lines 12-14].

Regarding claim 3, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 2 above further comprising: a network interface module that receives commands [Aziz -- Figure 9 and Col. 14 lines 59-62 – Slave segment managers, one of which is the subscriber management system of Salkewicz, receives instructions] from an integrated service management system [Aziz -- Figure 9, Col. 14 lines 9-14, lines 21-25, lines 29-35 and lines 57-61 – Master segment manager of control plane, i.e. integrated service management system, manages computing, networking and storage elements of grid by instructing slave segment managers, i.e. subscriber (router) management system, to modify appropriate resources and controls], a service order processing module that analyzes and executes the commands [Aziz -- Col. 23 lines 38-39 – Instructions are parsed and evaluated, and if appropriate, are queued for execution], updates a table of virtual private network information [Salkewicz -- Col. 3 lines 39-50, Col. 4 lines 21-40 and Col. 15 lines 9-12 and line 54 – Virtual network machine databases contain information to control operation of network devices, i.e. routers. Thus, because bindings and database information is dynamic, each change in configuration would require that the databases be updated to reflect the new changes], and sends new configuration information to said router through a control module [Aziz -- Col. 8 lines 35-38 and Col. 10 lines 31-50 – Management interface provides

**instruction to control plane, i.e. control module, which sends configuration information to devices, i.e. routers, switches, servers, disks, etc].**

Regarding claim 5, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 1 above, further including a server management system that controls operation of said virtual LAN switch **[Aziz – Col. 10 lines 37-60, Col. 14 lines 9-14 and lines 21-25 -- Aziz teaches a hierarchical control process containing a master segment manager and slave segment managers to control and manage the various computing, networking, i.e. controlling and configuring VLAN ports, and storage elements in the computing grid].**

Regarding claim 6, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 1 above, further including a storage management system that controls operation of said FC switch **[Aziz -- Col. 10 lines 37-62, Col. 14 lines 9-14 and lines 21-25 -- Aziz teaches a hierarchical control process containing a master segment manager and slave segment managers to control and manage the various computing, networking, and storage elements, i.e. controlling and configuring SAN FC switch, in the computing grid].**

Regarding claim 8, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein said integrated service management system further comprises: a network interface module that receives requests to change configuration **[Aziz -- Figure 9, Col. 10 lines 34-39, Col. 14 lines 59-62 and Col. 23 lines 16-39 – Organizational owner users, i.e. administrators, enters provisioning information, i.e.**

**change configuration, to master segment manager], a service order processing module that analyzes and executes requests to change configuration received by said network interface module [Aziz -- Col. 23 lines 38-39 – Instructions are parsed and evaluated, and if appropriate, are queued for execution], updates related tables in service management database [Salkewicz -- Col. 3 lines 39-50, Col. 4 lines 21-40 and Col. 15 lines 13-54 - Network databases are used for storing access and configuration information for devices, which obviously need to be updated as configurations change], and sends new configuration information using said network interface module [Aziz -- Col. 8 lines 35-38 and Col. 10 lines 31-50 – Management interface provides instruction to control plane, i.e. control module, which sends configuration information to devices, i.e. routers, switches, servers, disks, etc].**

Regarding claim 9, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, further comprising an operator console application that sends a request command to change service configuration to said integrated service management system, i.e. master segment manager **[Aziz -- Figure 9, Col. 10 lines 34-39, Col. 14 lines 59-62 and Col. 23 lines 16-39 – Organizational owner users, i.e. administrators, enters provisioning information, i.e. change configuration, to master segment manager via either an application or web page GUI].**

Regarding claim 10, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, further comprising a customer portal application that sends a request command to change service configuration to said integrated service management system,

i.e. master segment manager [**Aziz -- Figure 9, Col. 10 lines 34-39, Col. 14 lines 59-62 and Col. 23 lines 16-39 – Customers can enter provisioning information, i.e. change configuration, to master segment manager via a webpage console**].

Regarding claim 11, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, including storing destination information for services in a table [**Salkewicz -- Col. 3 lines 39-50, Col. 4 lines 21-40 and Col. 15 lines 1-54 – Network databases store information for allowing subscribers to gain access to various network resources, i.e. servers, etc. Thus, it is obvious that destination information, i.e. IP addresses, of those servers would obviously be stored in database, i.e. table**].

Regarding claim 14, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, including a service table having a customer ID mapping access to a particular VPN ID, server ID and volume/disk ID.

Aziz-Salkewicz teach that a subscriber ID, i.e. subscriber #1, subscriber #2, etc., are mapped to a given virtual network machine router which then provides them access to allowed resources, i.e. an ISP, corporate LAN, etc... [**Salkewicz -- Figure 21 and Col. 14 lines 44-67 – Col. 15 lines 1-8**].

In addition, this data is stored in a database, i.e. table, which is on the network device containing the virtual network machine routers [**Salkewicz -- Figure 20 and Col. 15 lines 13-33**].

While Aziz-Salkewicz do not explicitly teach mapping a VPN ID and a volume/disk ID to a given customer ID, it would have been obvious to a person of ordinary skill in the art to

incorporate any number of devices/resources, such as VPN's, volumes/disks, etc, into a service table for correlating these devices to a given customer to show which VPN ID and disk/volume ID a given customer is assigned, just as the server was mapped.

Regarding claim 16, Aziz teaches the invention substantially as claimed, a method for managing storage, comprising:

receiving a first and second request in an integrated service management system from a customer to change a configuration of a first and second service subsystem in an integrated storage and networking system, the second service subsystem being different than the first service subsystem **[Aziz – Figures 2, 9, 13-14, Col. 6 lines 40-50, Col. 14 lines 8-15, lines 21-25, lines 29-35 and lines 57-61, Col. 23 lines 26-38 – Users or customers input provisioning information requests, i.e. multiple, for changing or customizing a configuration of the system into a customer portal which relays the information to a master segment manager of control plane, i.e. integrated service management system. This information changes configuration of service subsystems of storage and networking systems, such as VLAN information, FC switches, CPU's, SAN's, etc.];**

analyzing said first and second requests to determine a first and second new configuration of said first and second service subsystems **[Aziz -- Col. 23 lines 38-39 – Information inputted is parsed and evaluated, i.e. analyzed, to determine appropriateness of change information from above requests]; and**

sending first and second new configuration information to the first and second subsystem managers for controlling configuration of the first and second service subsystems **[Aziz -- Col. 8**

**lines 35-38, Col. 10 lines 31-50 and Col. 14 lines 57-62 – Master segment manager provides information to slave/farm segment managers, i.e. first and second subsystem managers, which sends instructions over the control plane, i.e. control module, thereby sending configuration information to devices, i.e. routers, switches, servers, disks, etc].**

Aziz fails to explicitly teach updating first and second, i.e. multiple, configuration tables to reflect new changes to the various service subsystems.

However, Aziz does teach executing the instructions [Aziz -- Col. 23 lines 38-39] and changing configurations of the SAN switch controlling the disks, i.e. storage [Aziz -- Col. 10 lines 60-62]. Salkewicz, however, teaches the use of network databases, i.e. plural, for storing access and configuration information for devices, i.e. plural, therefore first and second, etc. [Salkewicz -- Col. 3 lines 39-50, Col. 4 lines 21-40 and Col. 15 lines 13-54].

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the configuration databases for network devices, as taught by Salkewicz into the invention of Aziz, in order to provide a common and widely used data structure for holding configuration info for network storage control devices, i.e. SAN switch.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (U.S. 6,597,956) and Salkewicz (U.S. 6,609,153), as applied to claim 2 above, in view of Akahane et al. (U.S. 2001/0050914) and Poisson et al. (U.S. 6,765,591).

Regarding claim 4, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 2 above, including a database containing records for controlling access to various services based upon identification information, which is used by the virtual network machine router **[Salkewicz -- Col. 15 lines 9-54]**.

Aziz-Salkewicz fail to teach a VPN table having the fields of VPN ID, IP address of the endpoints, protocol used, a flag to indicate whether access to public Internet is permitted and a VLAN ID.

Akahane, however, discloses a VPN table used on an edge router containing information specifying VPN ID, protocol, VLAN and destination IP **[Akahane -- Figures 6 and 8, page 5 paragraph [0059], page 5-6 paragraphs [0066-0068] and paragraph [0074]]**.

Furthermore, Poisson teaches a system for managing a VPN in which configuration information specified for a router includes an indication whether access to public Internet is permitted **[Poisson -- Figure 18 and Col. 7 lines 26-35 – Security configurations are displayed showing the settings for what communication types, i.e. HTTP or Internet, are allowed or enabled based upon an entry to a table reflecting a flag/bit set]**.

Salkewicz teaches that layer 2 and 3 addressing is used in the database for controlling access to the virtual network machine router.

Therefore, it would have been obvious to a person of ordinary skill in the art to include the source IP address of one endpoint into the VPN table in order to determine the access levels and resources a certain subscriber has access to from a given endpoint.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the VPN table containing VPN ID, protocol, VLAN and destination IP, as taught

by Akahane along with the public Internet permission configuration information, as taught by Poisson into the invention of Aziz-Salkewicz, in order to provide a well known data structure to control access and regulate the resources that subscribers have access to.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (U.S. 6,597,956) and Salkewicz (U.S. 6,609,153), as applied to claim 8 above, in view of Kim et al. (US 2002/0069272).

Regarding claim 12, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, but fail to explicitly teach a server table having a server ID, an address, a VLAN identification, an application identification, an operating system identification and CPU information.

Kim, however, discloses a system for managing server configurations having a server table outlining such information as server ID, an address, i.e. IP, an operating system ID and a CPU information **[Kim -- Page 1 paragraph [0011] and page 5 paragraphs [0051-0053] and paragraph [0055]]**.

Aziz discloses a virtual server farm (VSF) system which consists of multiple VLAN having ID's such as VLAN1 and VLAN2 along with multiple types of CPU servers, including web servers, application servers and database servers **[Aziz -- Col. 2 lines 35-41 and Col. 7 lines 9-17]**. While Kim fails to explicitly teach fields in the table for VLAN ID and application ID, it would have been obvious to a person of ordinary skill in the art to incorporate such fields as VLAN ID

and application ID, i.e. web server, application server or database server, in order to further improve the speed and efficiency of matching server configurations by providing more specific information regarding each server type.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the server configuration table, as taught by Kim into the invention of Aziz-Salkewicz, in order to provide a well-known and widely used data structure for storing information about server configuration which would allow one to ascertain resources of servers for proper allocation and deallocation of resources as necessary and desired.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (U.S. 6,597,956) and Salkewicz (U.S. 6,609,153), as applied to claim 8 above, in view of Blumenau et al. (U.S. 6,295,575).

Regarding claim 13, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, but fails to explicitly teach a storage table having a volume ID, a port ID, a server ID, a capacity ID and access information. Blumenau, however, discloses a system for configuring a data storage unit consisting of a table having information of volume ID, port information, host, i.e. server, ID and access flag information [**Blumenau -- Figures 5 and 8 and Col. 11 lines 51-67 – Col. 12 lines 1-13**].

While Blumenau fails to explicitly teach a field for capacity, it is well known and obvious that a major property of a disk or volume is capacity and therefore, it would have been obvious to a person of ordinary skill in the art to incorporate such a capacity field, in order to allow a user to easily ascertain the size or capacity of a disk/volume.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the storage table containing volume ID, port information, host ID, access information and capacity information, as taught by Blumenau into the invention of Aziz-Salkewicz, in order to provide a well known data structure for holding configuration information associated with the disks.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (U.S. 6,597,956) and Salkewicz (U.S. 6,609,153), as applied to claim 8 above, in view of Yamamoto (US 2003/0097370).

Regarding claim 15, Aziz-Salkewicz teach the invention substantially as claimed, as aforementioned in claim 8 above, including a table having a customer ID and mappings to various services the subscriber has access to **[Salkewicz -- Col. 3 lines 39-50, Col. 4 lines 21-40 and Col. 15 lines 13-54]**.

Aziz-Salkewicz, however, fail to teach having the status of a server or other resource.

Yamamoto, however, discloses a status mapping table which correlates a server ID along with failure and active status information [Yamamoto -- **Figure 2-4 and page 4 paragraphs [0090-0094]**].

While Yamamoto does not explicitly teach storing the status of a VPN and a volume/disk, it would have been obvious to a person of ordinary skill in the art to incorporate any number of devices/resources, such as VPN's, volumes/disks, etc, into a status table for storing the status of these and other devices, just as the status of a server can be stored.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the status information of servers, as taught by Yamamoto into the invention of Aziz-Salkewicz, in order to provide a common and widely used data structure for holding status information of resources a particular customer has access to which can be used to determine availability of a device or resource.

### *Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 571-272-3917. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TJM  
March 1, 2005

  
BUNJOB JAIJOENCHONWANIT  
PRIMARY EXAMINER